CDRS-200E

Compact Digital Rugged Switch

Elbit Systems
Land and C4I

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CDRS-200E is a rugged digital switch for small and medium level field units, combining cost-effective field telephony with VoIP and multimedia capabilities. The system's modular construction makes it suitable for regiments, battalions and brigade headquarters, providing an effective solution for up to 192 stations and trunks. CDRS-200E can be connected in a meshed network and includes state-of-the-art IP capabilities including support for IP phones (SIP, MGCP), trunks and robust networking.

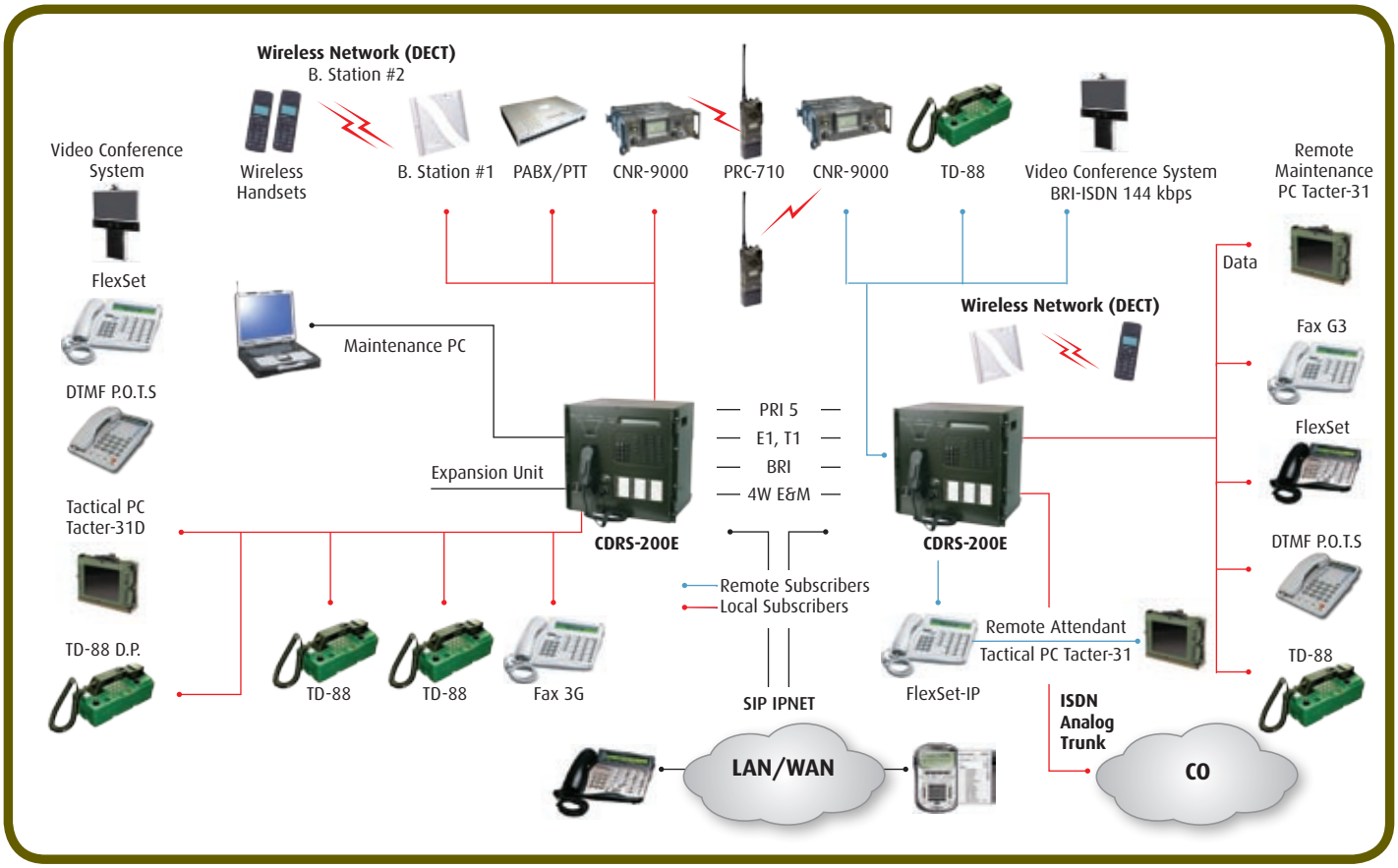
Networking with CDRS-200E

The CDRS-200E provides digital multi-site networking between CDRS-200E systems in ISDN (BRI and PRI) environments. Each site possesses an identically rich range of network-wide features; utilizes the same method of operation; and employs a flexible numbering plan – transforming each CDRS-200E system into an intelligent node or hub within the network.

In addition, CDRS-200E supports QSIG over IP, allowing for point-to-multipoint IP networking while maintaining high security. From integrated IP trunk gateways to industry-standard ISDN cards connected to VoIP switches and routers, the CDRS-200E can be configured to meet the most stringent networking requirements. The CDRS-200E can also interconnect sites via SIP trunks.

Comprehensive Multimedia Capabilities

The CDRS-200E combines an outstanding cost-effective solution for field telephony at the unit level, with VoIP and multimedia capabilities delivering real-time information and intelligence. All data can be routed via IP or ISDN channels (up to 128Kbps per circuit).



Key Features

- Up to 192 wire line subscribers
- Rapid deployment with up to eight wireless-base stations supporting eight simultaneous calls in each base station
- 240 IP endpoints per gateway card
- Four Combat Net Radio Interface (CNRI) support
- Magneto, analog, digital, ISDN and IP station support
- DTMF, dial-pulse and ISDN station signaling
- Full multimedia support over ISDN and IP including voice, video, fax, and data
- Built-in attendant station and an optional remote attendant station
- Modular design, increased capacity by adding cards and expansion cabinets
- Fully automatic with multi-button feature phone support
- IP capabilities via an IP gateway card

System Features

- Unattended and attended operation
- Call forward (busy, no answer, unconditional), hold, transfer pickup, follow me
- Priority preemption and intrusion
- Switched hot line
- Abbreviated dialing
- Automatic call back
- Toll barrier
- Automatic Route Selection (ARS) Group calling, Closed User Group (CUG) and emergency conferencing (multi-way)
- Built-in self test (BIST)
- Closed User Group
- Calling line ID presentation

Operational Features

- Illuminated front panel display
- Operator assisted calls (CB, LB, radio, all phone types including IP)
- Alarm indication
- Busy verification
- Station control
- Silent monitoring

RF Specifications

2.4GHz ISM ETSI 300-328	**1.9GHz PCS FCC**	**1.88GHZ DECT GAP**
Frequency Band 2418-2457 MHz	Frequency Band 1920-1930 MHz	Frequency Band 1920-1930 MHz
RF peak power 50 m W eirp	RF peak power 40 m W	RF peak power 25 m W
Modulation	Multiple Access Method	Duplex Mode
Frequency Hopping Spread Spectrum 100 hops per second	TDMA/FDMA/ TDD	TDMA/FDMA/ TDD

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Technical Specifications	
Switching Specifications	Digitization method: PCM A/μ law
	Switching matrix: 512 timeslots
	Busy hour call attempts (BHCA): 150,000
Card Deployment and Capacity	Base cabinet slots: Up to eight universal slots
	Maximum system capacity (Base+2 expansion cabinets): 28 universal slots
	Subscriber Types
	Analog (POTS): 2-wire, dial pulse, DTMF signaling, magneto (CB, CBS, LB)
	Digital: ISDN, BRI (via NT1), 2-wire, modular ISDN (UPN)
	Wireless: Mobile phones (DECT)
	IP Phones: SIP (audio, video), softphone, MGCP
	Special: 4 CNRI
	Network Interfaces
	Trunk Groups E1/T1 (QSIG, CAS), ISDN (PRI), IP trunks (SIP and IPNET)
	Trunk Channel 2-wire CO/GSM, 4-wire E&M, BRI, SIP
Wireless Specifications	
Base Station Characteristics	Base Station Support: • Base cabinet support: Up to 192 wireless handsets • Base cabinet support: Up to 96 subscribers
	Base Station Specifications • Coverage radius (typical): 100m (indoor), 330m (outdoor) • Simultaneous calls per base cabinet: 8, 96 • Dimensions (HxWxD): 10x10x4 cm • Installation: Wall or ceiling mount • Call security: Digital voice transmission encrypted voice coding, handset ESN/system ID validation • Voice encoding: 8Kbps error correcting vocoder
Handset Specifications	Weight: 200 grams
	Power source: 3.6V NiMH rechargeable battery
	Talk time (continuous): 16 hours
	Standby time: 150 hours
	Average RF power: 5 mW

Physical Characteristics	
Dimensions (HxWxD)	Base cabinet: 444x444x335 mm Expansion cabinet: 444x444x335 mm
Weight	Base cabinet: < 27 kg Expansion cabinet: 18 kg
Power	115/220 VAC and/or 12-24 VDC
	70 watts (fully populated cabinet)
Environmental Characteristics	Operating temperature: -20°C to +55°C
	Storage temperature: -25°C to +60°C
	Relative humidity: 98% at +55°C
	Environmental condition: per MIL-STD-810E
Electromagnetic Compatibility	Per MIL-STD-461C
	Lightning protection: All lines/trunks
	Installation options: Table-top mount
Accessories	Battery charger: 220VAC/12VDC, 20 Amp
	Battery pack: rugged, maintenance free, heavy duty, lead-acid, 12VDC/100 A/H
	12 hour continuous operation of switch with full basic capacity
	Attendant handset: military type H-250

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